

In the Claims

1. (Previously Presented) A Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr, having a surface with at least one gap portion, and a corrosion-resistant film containing metal powder having ionization tendencies greater than iron on the surface, wherein said metal powder is zinc in an amount, based on the weight of the paint film, which satisfies Expression (1):

$$70 - \{2.7 \times (\text{Cr} + 3.3\text{Mo})\} \leq X \leq 70 \quad (1)$$

wherein X is the metal zinc powder content (% by mass) in the paint film,

Cr is the Cr content (% by mass) in the Fe-Cr alloy,

and Mo is the Mo content (% by mass) in the Fe-Cr alloy,

said metal powder content in a dry paint film is about 20% to about 60% by volume, and the dry paint film has a thickness of about 5 μm to about 100 μm .

2. (Original) The Fe-Cr alloy structure according to Claim 1, wherein said metal powder is one or more elements selected from the group consisting of Mg, Al, and Zn.

3 – 4 (Cancelled)

5. (Original) The Fe-Cr alloy structure according to Claim 1, wherein the average particle diameter of said metal powder is about 3 μm or smaller.

6 – 16 (Cancelled)

17. (Previously Presented) A method for manufacturing an Fe-Cr alloy structure comprising applying, on a surface an Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr and including at least a gap portion, a corrosion-resistant film containing metal powder having ionization tendencies greater than iron, to a dry film thickness of about 5 μm to about 100 μm , so that the content of said metal powder in the dry paint film is about 20% to about 60% by volume, wherein the

metal powder is zinc in an amount, based on the weight of the paint film, which satisfies Expression (1):

$$70 - \{2.7 \times (\text{Cr} + 3.3\text{Mo})\} \leq X \leq 70 \quad (1)$$

wherein X is the metal zinc powder content (% by mass) in the paint film,

Cr is the Cr content (% by mass) in the Fe-Cr alloy,

and Mo is the Mo content (% by mass) in the Fe-Cr alloy.

18. (Original) The method according to Claim 17, wherein said metal powder is one or more elements selected from the group consisting of Mg, Al, and Zn.

19 – 20 (Cancelled)

21. (Original) The method according to Claim 17, wherein the average particle diameter of said metal powder is about 3 μm or smaller.

22 – 28 (Cancelled)

29. (Currently Amended) A Fe-Cr alloy structure according to Claim 1, wherein said corrosion-resistance film [[primarily]] contains epoxy resin, and the balance comprises a drying agent, hardening agent, plasticizer, a dispersant and an emulsifier.

30. (Previously Presented) A method for manufacturing an Fe-Cr alloy structure comprising applying, on a surface an Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr and including at least a gap portion, a corrosion-resistant film containing metal powder having ionization tendencies greater than iron, to a dry film thickness of about 5 μm to about 100 μm, so that the content of said metal powder in the dry paint film is about 20% to about 60% by volume, wherein the metal powder is zinc in an amount, based on the weight of the paint film, which satisfies Expression (1):

$$70 - \{2.7 \times (\text{Cr} + 3.3\text{Mo})\} \leq X \leq 70 \quad (1)$$

wherein X is the metal zinc powder content (% by mass) in the paint film,

Cr is the Cr content (% by mass) in the Fe-Cr alloy,

and Mo is the Mo content (% by mass) in the Fe-Cr alloy, wherein the composition of said Fe-Cr alloy structure is, in terms of % by mass, about 0.020% or less of C, about 1.0% or less of Si, about 0.5% to about 5.0% or less of Mn, about 0.05% or less of P, about 0.02% or less of S, about 6% to about 20% of Cr, about 1.0% or less of Al, and about 0.03% or less of N, with the remainder being essentially Fe and unavoidable impurities, which forms an alloy steel with a tensile strength (TS) of about 450 to about 650 MPa.

31. (Previously Presented) The Fe-Cr alloy structure according to Claim 30, wherein said Fe-Cr alloy structure further comprises, in terms of % by mass, about 3% or less of Mo, about 2% or less of Cu, and about 9% or less of Ni.

32. (Previously Presented) The Fe-Cr alloy structure according to Claim 30, wherein said Fe-Cr alloy structure further comprises, in terms of % by mass, about 0.0003% to about 0.005% of B.

33. (Previously Presented) An underside member of an automobile formed from the Fe-Cr alloy structure according to Claim 30.

34. (Previously Presented) A Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr, having a surface with at least one gap portion, and a corrosion-resistant film containing metal powder having ionization tendencies greater than iron on the surface, wherein said metal powder is zinc in an amount, based on the weight of the paint film, which satisfies Expression (1):

$$70 - \{2.7 \times (\text{Cr} + 3.3\text{Mo})\} \leq X \leq 70 \quad (1)$$

wherein X is the metal zinc powder content (% by mass) in the paint film,

Cr is the Cr content (% by mass) in the Fe-Cr alloy, and Mo is the Mo content (% by

mass) in the Fe-Cr alloy, said metal powder content in a dry paint film is about 20% to about 60% by volume, and the dry paint film has a thickness of about 5 μm to about 100 μm , wherein said Fe-Cr alloy structure is a ferritic stainless steel, with a composition of, in terms of % by mass, about 0.1% or less of C, about 1.0% or less of Si, about 1.5% or less of Mn, about 0.06% or less of P, about 0.03% or less of S, about 1.0% or less of Al, about 11% to about 20% of Cr, and about 0.04% or less of N, about 0.01% to about 0.8% of Nb and/or about 0.01% to about 1.0% of Ti, with the remainder being essentially Fe and unavoidable impurities.

35. (Previously Presented) The Fe-Cr alloy structure according to Claim 34, wherein said Fe-Cr alloy structure further comprises, in terms of % by mass, about 3.0% or less of Mo, about 2.0% or less of Cu, and about 2.0% or less of Ni.

36. (Previously Presented) The Fe-Cr alloy structure according to Claim 34, wherein said Fe-Cr alloy structure further comprises, in terms of % by mass, about 0.0003% to about 0.005% of B.

37. (Previously Presented) The Fe-Cr alloy structure according to Claim 30, wherein the average particle diameter of Zn in said Zn-containing dry paint film is about 3 μm or smaller.

38. (Previously Presented) The Fe-Cr alloy structure according to Claim 34, wherein the average particle diameter of Zn in said Zn-containing dry paint film is about 3 μm or smaller.

39. (Previously Presented) A fuel tank formed from the Fe-Cr alloy structure according to Claim 34.

40. (Previously Presented) A peripheral member of a fuel tank of an automobile formed from the Fe-Cr alloy structure according to Claim 34.

41. (Previously Presented) A method for manufacturing an Fe-Cr alloy structure comprising applying, on a surface an Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr

and including at least a gap portion, a corrosion-resistant film containing metal powder having ionization tendencies greater than iron, to a dry film thickness of about 5 μm to about 100 μm , so that the content of said metal powder in the dry paint film is about 20% to about 60% by volume, wherein said corrosion-resistant film contains epoxy resin, and the balance comprises a drying agent, a hardening agent, a plasticizer, a dispersant, and an emulsifier.

42. (Previously Presented) A method for manufacturing an Fe-Cr alloy structure comprising applying, on a surface an Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr and including at least a gap portion, a corrosion-resistant film containing metal powder having ionization tendencies greater than iron, to a dry film thickness of about 5 μm to about 100 μm , so that the content of said metal powder in the dry paint film is about 20% to about 60% by volume, wherein the metal powder is zinc in an amount, based on the weight of the paint film, which satisfies Expression (1):

$$70 - \{2.7 \times (\text{Cr} + 3.3\text{Mo})\} \leq X \leq 70 \quad (1)$$

wherein X is the metal zinc powder content (% by mass) in the paint film,

Cr is the Cr content (% by mass) in the Fe-Cr alloy,

and Mo is the Mo content (% by mass) in the Fe-Cr alloy, wherein the composition of said Fe-Cr alloy structure is, in terms of % by mass, about 0.02% or less of C, about 1.0% or less of Si, about 0.5% to about 5.0% of Mn, about 0.05% or less of P, about 0.020% or less of S, about 6% to about 20% or less of Cr, about 1.0% or less of Al, and about 0.03% or less of N, with the remainder being essentially Fe and unavoidable impurities, which forms an alloy steel with a tensile strength (TS) of about 450 to about 650 MPa.

43. (Previously Presented) The method according to Claim 42, wherein said Fe-Cr alloy structure further comprises, in terms of % by mass, about 3% or less of Mo, about 2% or less of Cu,

and about 9% or less of Ni.

44. (Previously Presented) The method according to Claim 42, wherein said Fe-Cr alloy structure further comprises, in terms of % by mass, about 0.0003% to about 0.005% of B.

45. (Previously Presented) A method for manufacturing an Fe-Cr alloy structure comprising applying, on a surface an Fe-Cr alloy structure containing about 6% to about 25% by mass of Cr and including at least a gap portion, a corrosion-resistant film containing metal powder having ionization tendencies greater than iron, to a dry film thickness of about 5 μm to about 100 μm , so that the content of said metal powder in the dry paint film is about 20% to about 60% by volume, wherein the metal powder is zinc in an amount, based on the weight of the paint film, which satisfies Expression (1):

$$70 - \{2.7 \times (\text{Cr} + 3.3\text{Mo})\} \leq X \leq 70 \quad (1)$$

wherein X is the metal zinc powder content (% by mass) in the paint film,

Cr is the Cr content (% by mass) in the Fe-Cr alloy,

and Mo is the Mo content (% by mass) in the Fe-Cr alloy, wherein said Fe-Cr alloy structure is a ferritic stainless steel, with a composition of, in terms of % by mass, about 0.1% or less of C, about 1.0% or less of Si, about 1.5% or less of Mn, about 0.06% or less of P, about 0.03% or less of S, about 1.0% or less of Al, about 11% to about 20% of Cr, and about 0.04% or less of N, about 0.01% to about 0.8% of Nb and/or about 0.01% to about 1.0% of Ti, with the remainder being essentially Fe and unavoidable impurities.

46. (Previously Presented) The method according to Claim 45, wherein said Fe-Cr alloy structure further comprises one or more elements selected from the group consisting of about 3.0% or less of Mo, about 2.0% or less of Cu, and about 2.0% or less Ni in terms of % by mass.

47. (Previously Presented) The method according to Claim 45, wherein said Fe-Cr alloy

structure further comprises, in terms of % by mass, about 0.0003% to about 0.005% of B.

48. (Previously Presented) The method according to Claim 42, wherein the average particle diameter of Zn in said Zn-containing dry paint film is about 3 μm or smaller.